

Publication

EP 0528340 A3 19940406

Application

EP 92113711 A 19920812

Priority

US 74671491 A 19910819

Abstract (en)

[origin: EP0528340A2] Polymeric carbon can be formed by a method comprising the steps of (a) polymerizing 1-bromo-4-lithiobenzene to form a brominated polyphenylene wherein the ratio of brominated to non-brominated residues in the polymer is 1:5 or greater; (b) functionalizing the brominated polyphenylene to replace the bromide groups with a substituted or unsubstituted acetylene group; and (c) heating the functionalized polymer to a temperature of 900 DEG C to form polymeric carbon. Preferably, the brominated polyphenylene is formed in an ethereal solvent such as tetrahydrofuran and then functionalized using a palladium catalyst and a copper catalyst. When the acetylene substituent is phenylacetylene, the product of the method is glassy carbon.

IPC 1-7

C04B 35/52; C08G 61/10

IPC 8 full level

C04B 35/524 (2006.01)

CPC (source: EP US)

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Citation (search report)

- [A] FR 2147614 A5 19730309 - HERCULES INC & US 4070333 A 19780124 - JABLONER HAROLD
- [A] DIECK K. A. & AL.: "Palladium catalysed synthesis of aryl, heterocyclic and vinylic acetylene derivatives", JOURNAL OF ORGANOMETALLIC CHEMISTRY, vol. 93, 1975, pages 259 - 263
- [A] CASSAR L.: "Synthesis of aryl- and vinyl-substituted acetylene derivatives by the use of nickel and palladium complexes", JOURNAL OF ORGANOMETALLIC CHEMISTRY, vol. 93, 1975, pages 253257
- [A] "Heat-curable polyaromatic keto-ether-sulfones.XIV. More polymers with 2,2' -Diphenylethyne-4,4'-Diphenyl units and their rearrangement products", JOURNAL OF POLYMER SCIENCE, vol. 17, no. 4, April 1979 (1979-04-01), pages 1073 - 1087
- [DA] FITZER E.: "From polymers to polymeric carbon- A way to synthesize large variety of new materials", PURE AND APPLIED CHEMISTRY, vol. 52, no. 7, 1980, pages 1865 - 1882

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